Amendments to the Claims:

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): A delivery device for delivering a reagent into a target material comprising:

a body which defines an interior chamber and a delivery port fluidly connected with the chamber, the chamber holding a reagent in solution;

a ~~reagent permeable~~ membrane in fluid communication with the chamber and the delivery port, through which reagent passes when the delivery port is in fluid communication with the target material, such that substantially no volume change occurs in the target material during delivery of the reagent to the target material; and

a matrix material dispersed throughout the body and being in contact with the membrane, the reagent diffusing through the matrix material to the delivery port;

wherein the membrane includes a plurality of holes which define through passages through the membrane, each of the through passages being spaced apart from one another and separated by a rigid, impermeable portion of the membrane.

Claim 2 (Cancelled)

Claim 3 (Withdrawn): The delivery device of claim 2, wherein the matrix material is positioned intermediate the reagent solution and the membrane, such that reagent passes through the membrane and the matrix material to enter the target material.

Claim 4 (Withdrawn): The delivery device of claim 2, wherein the matrix material is located throughout the reagent solution.

Claim 5 (Withdrawn): The delivery device of claim 4, wherein the matrix material includes a porous material, the reagent being carried within pores of the material.

Claim 6 (Withdrawn): The delivery device of claim 5, wherein the porous material is selected from the group consisting of nickel, titanium, stainless steel, ceramic, glass, and combinations thereof.

Claim 7 (Withdrawn): The delivery device of claim 2, wherein the matrix material includes a gel.

Claim 8 (Withdrawn): The delivery device of claim 7, wherein the gel is selected from the group consisting of: polyacrylamide, agarose, hydroxyethyl methacrylate, and combinations thereof.

Claim 9 (Original): The delivery device of claim 1, wherein the body narrows intermediate the delivery port and the chamber.

Claim 10 (Original): The delivery device of claim 1, wherein the delivery port has a diameter of from about 10 to about 300 microns.

Claim 11 (Original): The delivery device of claim 1, wherein the membrane has a thickness of less than about 100 microns.

Claim 12 (Original): The delivery device of claim 11, wherein the reagent permeable membrane has a thickness of from about 2-50 microns.

Claim 13 (Original): The delivery device of claim 1, wherein the membrane is in or adjacent to the delivery port.

Claim 14 (Cancelled)

Claim 15 (Previously Presented): The delivery device of claim 1, wherein the holes have a diameter of less than about 300 microns.

Claim 16 (Previously Presented): The delivery device of claim 1, wherein the holes have a diameter of at least 100 nm.

Claim 17 (Previously Presented): The delivery device of claim 1, wherein the holes have a diameter of about 10-20 microns.

Claim 18 (Previously Presented): The delivery device of claim 1, wherein the holes are filled with a reagent permeable material.

Claim 19 (Original): The delivery device of claim 1, further including an agitator which agitates at least a portion of the body.

Claim 20 (Withdrawn): The delivery device of claim 1, wherein at least the delivery port is rotatable, relative to a stationary portion of the delivery device.

Claim 21 (Withdrawn): The delivery device of claim 20, further including a housing which houses the body and a motor, the motor being capable of rotating the delivery port.

Claim 22 (Withdrawn): The delivery device of claim 21, further including a power source for the motor, carried by the housing.

Claim 23 (Withdrawn): The delivery device of claim 21, wherein the housing defines an opening which provides access to the delivery port for the target liquid.

Claim 24 (Original): The delivery device of claim 1, further including a heating or cooling device which selectively heats or cools at least a portion of the body.

Claim 25 (Original): The delivery device of claim 1, further including a control system which calculates a delivery time for preparing a target solution of a preselected reagent concentration and volume.

Claim 26 (Original): The delivery device of claim 1, wherein the target material comprises a liquid.

Claim 27 (Withdrawn): The device of claim 21, further including a scanner which reads a computer recognizable indicia on the body, the indicia including information sufficient for the control system to determine a delivery rate of reagent from the burette, the control system receiving signals from the scanner and calculating the delivery time from the signals.

Claim 28 (Withdrawn): The device of claim 27, further including means for inputting information into the control system which affects the delivery rate.

Claim 29 (Original): The delivery device of claim 1, further including a hydrophobic coating on an exterior surface of the body.

Claim 30 (Original): The delivery device of claim 1, wherein the reagent diffuses from the delivery device into the target liquid with substantially no volume change in the target liquid.

Claim 31 (Withdrawn): A method of forming a target solution comprising: loading a reagent solution into a chamber fluidly connected with a delivery port; and fluidly contacting the delivery port with a target liquid for a sufficient time such that the reagent diffuses from the chamber through a porous material and delivery port into the target liquid to form the target solution.

Claim 32 (Withdrawn): The method of claim 31, wherein the delivery port comprises a plurality of holes and the step of contacting further includes the reagent passing through the holes.

Claim 33 (Withdrawn): The method of claim 32, wherein the holes are packed with a reagent permeable material, the step of passing including passing the reagent through the reagent permeable material.

Claim 34 (Withdrawn): The method of claim 31, further including: agitating at least one of the reagent solution within the chamber and the delivery port during the step of contacting.

Claim 35 (Withdrawn): The method of claim 34, wherein the step of agitating includes rotating at least the delivery port relative to the target liquid.

Claim 36 (Withdrawn): The method of claim 31, further including: heating or cooling at least one of the reagent solution within the chamber and the delivery port during the step of contacting.

Claim 37 (Withdrawn): The method of claim 31, wherein the reagent diffuses into the target solution at a substantially constant rate after a period of contact of less than 1 second.

Claim 38 (Withdrawn): The method of claim 31, further including: determining a delivery time for preparing a target solution of a desired concentration from the reagent and the target liquid; and automatically controlling the fluid contact of the delivery port with the liquid for the determined time.

Claim 39 (Withdrawn): The method of claim 31, further including: forming the holes by drilling bores in a substrate material with a laser.

Claim 40 (Withdrawn): The method of claim 31, wherein the burette has a conical tip and wherein the delivery time is determined from the following equation:

$$C(t)=Cr(1-\exp[-B.t/V])$$

and optionally determining B using the expression

$$B=D\ r\ \Pi \tan \theta$$

where C(t)=a concentration of the reagent in the liquid at delivery time t;

Cr=a concentration of the reagent within the body;

V=volume of the liquid;

B=a constant for the body;

D=diffusion coefficient of the reagent being delivered;

r=radius of delivery port opening;

θ=cone angle of delivery port; and

t=time.

Claim 41 (Withdrawn): The method of claim 31, wherein the delivery port includes a membrane with at least one pore and the method further includes:

determining the delivery rate by the following equation:

$$\text{Delivery rate}=n\,D[(\pi d^2/z)/(4+\pi d/z)]c_b$$

where D is the diffusion coefficient;

n is the number of pores;

d is the pore diameter;

z is the membrane thickness; and

c_b is the concentration of the reagent in the reagent solution in the chamber.

Claim 42 (Withdrawn): A method of forming a target solution of a desired concentration comprising: contacting a target liquid with a delivery port of a body for a period of time, the body containing a reagent in a solution, the delivery port including a plurality of holes, whereby the reagent diffuses through the holes into the liquid to form the target solution, the target solution having substantially the same volume as the target liquid.

Claim 43 (Withdrawn): The method of claim 42, wherein the change in volume of the target liquid is less than 5% of that of the volume of the reagent solution corresponding to the amount of the reagent transferred from the body to the target liquid to form the target solution.

Claim 44 (Withdrawn): The method of claim 42, wherein the holes have a diameter of less than about 300 microns.

Claim 45 (Withdrawn): The method of claim 42, wherein the step of contacting includes allowing the reagent to diffuse through a matrix material to the delivery port.

Claim 46 (Withdrawn): The method of claim 42, wherein the time period is predetermined.

Claim 47 (Withdrawn): The method of claim 42, wherein the period of time is determined by measuring a property of the target liquid which corresponds to a concentration of the reagent in the target liquid or a species derived from the reagent.

Claim 48 (Withdrawn): A diffusional burette for delivery of a reagent into a target material comprising: a body which defines an interior chamber for receiving the reagent and a delivery port fluidly connected with the chamber, the delivery port defining a plurality of holes, each of the holes having a cross sectional width of less than 500 microns; a reagent permeable matrix material within the body; and a solution of the reagent in the chamber, such that the reagent diffuses from the chamber via the holes into the target material when the delivery port is in fluid communication with the target material.

Claim 49 (Withdrawn): The diffusional burette of claim 48, wherein the reagent permeable matrix material is disposed in or adjacent to the holes, such that the reagent passes through the reagent permeable matrix material during delivery of the reagent.

Claim 50 (Withdrawn): The diffusional burette of claim 48, wherein the reagent permeable matrix material is selected from the group consisting of cellulose, modified celluloses, polyurethane, agarose, polyacrylamide, hydrogels, cyclopore films, microporous filters, and combinations thereof.

Claim 51 (Withdrawn): The diffusional burette of claim 48, wherein the plurality of holes includes at least three holes.

Claim 52 (Withdrawn): The diffusional burette of claim 48, wherein the solution is dispersed through the reagent permeable matrix material and wherein the reagent permeable matrix material comprises one of a porous solid and a gel.

Claim 53 (Withdrawn): The diffusional burette of claim 48, wherein the holes are less than 100 microns in width.

Claim 54 (Withdrawn): The diffusional burette of claim 48, further including a housing which houses the body, the delivery port being movable between a first position, in which the delivery port extends through an opening in the housing, and a second position, in which the delivery port is retracted within the housing.

Claim 55 (Withdrawn): The diffusional burette of claim 48, further including a means for agitating at least one of the delivery port and the target material.

Claim 56 (Withdrawn): The diffusional burette of claim 55, wherein the means for agitating includes a motor which rotates the body.

Claim 57 (Withdrawn): A method of forming a delivery device comprising: providing a body which defines an interior chamber and a delivery port fluidly connected with the chamber: closing the delivery port with a reagent permeable porous material; introducing a reagent in solution to the chamber, the reagent permeable porous material being such that reagent diffuses through the reagent permeable porous material to the delivery port when the delivery port is brought into fluid contact with a target liquid and is held within the body when the delivery port is removed from fluid contact with the target liquid.

Claim 58 (Withdrawn): The method of claim 57, wherein the reagent permeable porous material includes at least one of a gel and a membrane, the membrane defining a plurality of through passages. a reagent permeable membrane in fluid communication with the chamber and the delivery port, through which reagent passes when the delivery port is in fluid communication with the target material, such that substantially no volume change occurs in the target material during delivery of the reagent to the target material.